

REMARKS

Claims 1, 3-11, and 13-18 were finally rejected in the last Office Action. This paper is a response to the Final Office Action.

The drawings were objected to under 37 C.F.R. §1.84 (p) (5), because "reference character 21 are not described in the specification." (Office Action, section two). The specification was amended in the last Response to Office Action, by the amendment of the specification on page 8, line 23 to read "Ohmic layer 22A provides ohmic contact to semiconductor 21." This amendment was filed on June 28, 2001, and indicated as entered in the Office Action dated October 3, 2001. Hence the specification as previously amended discloses the reference character "21", and the drawings thus satisfy the requirements of 37 C.F.R §1.84 (p) (5). Applicants respectfully request therefore, that the Examiner withdraw the objection to the drawings.

Claims 1, 3-11, and 13-18 stand rejected under 35 U.S.C. §103 (a) as being unpatentable over Biing-Jye et al. in view of Haitz et al. Regarding Claim 1, the Examiner states:

Haitz et al. discloses in Fig.1 and column 3 lines 16-28 a multi-layer contact having a reflectivity greater than 75% for light at an operating wavelength of a light emitting device. It would have been obvious to one of ordinary skill in the art to use the reflectivity of greater than 75% of Haitz et al. in the light emitting device of Biing-Jye et al. in order to decrease photons absorption as taught by Haitz et al. in column 2, lines 5-8. (Office Action, section five).

The rejection is traversed on the grounds that the combination of references was not adequately motivated. A feature of the present invention, as recited in claim 1, is "a continuous conductive layer that makes ohmic contact to the heterostructure." The Examiner relies on Biing-Jye et al. as meeting this feature. The second reference, Haitz et al., however teaches away from a continuous conductive layer: "Due to their high density of charge carriers, the contacts which allow a voltage to be applied across an LED absorb a great deal of the light...Minimizing the size of the LED's contacts increases the extraction efficiency of the LED..." (Haitz et al. column 1, lines 18-22). Haitz et al. goes on to describe a discontinuous film created by "using a laser to create small alloyed dots...Typically, only 1% of the bottom surface is formed into contacts, leaving 99% of the bottom surface to serve as a reflecting surface." Furthermore, Haitz relies on the discontinuous nature of the film to achieve the increased reflectivity, by reducing the area on which the conductive islands are formed.

Hence the Haitz et al. reference teaches away from the Biing-Jye et al. continuous conductive layer. Thus the two references teach two diametrically opposed conductive layer configurations. Hence, one of ordinary skill in the art, seeking to make a device with a continuous conductive layer to make ohmic contact (Biing-Jye et al.), would not be motivated to use the technique described in Haitz et al. (75% reflectivity), where "typically only 1% of the bottom surface is formed into absorbing, ohmic contacts." Therefore, due to this teaching away from the continuousness of the conductive layer, it would not in fact be obvious to one of ordinary skill in the art to combine the teachings of Haitz et al. with those of Biing-Jye et al. to meet the claimed invention, and so the §103 rejection is prima facie unfounded, and should be withdrawn.

Claims 4, and 8-10 depend directly or indirectly from independent claim 1, and are therefore patentable over Biing et al. in view of Haitz et al.

Claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Biing-Jye et al. in view of Haitz et al. However, Claim 11 recites the same element as Claim 1: "a continuous conductive layer that makes ohmic contact to the heterostructure." Therefore, Claim 11 is patentable for the same reason as Claim 1, that it is not obvious to combine Haitz et al. with Biing-Jye et al. to obtain the elements recited in Claim 11.

Claim 14 depends directly from Claim 11, and is therefore patentable over Biing-Jye et al. and Haitz et al.

The Examiner made the following rejections under 35 U.S.C. §103(a): Claims 3 and 13 as unpatentable over Biing-Jye et al. and Haitz et al. in view of Sugiura et al., Claims 5 and 15 as unpatentable over Biing-Jye et al. and Haitz et al. in view of Nakagawa et al., Claims 6 and 16 as unpatentable over Biing-Jye et al. and Haitz et al. in view of Liu et al., Claims 7 and 17 as unpatentable over Biing-Jye et al. and Haitz et al. in view of Schetzina, and Claim 18 as unpatentable over Biing-Jye et al. and Haitz et al. in view of Okazaki.

None of Sugiura et al., Nakagawa et al., Liu et al., Schetzina, or Okazaki remedy the defects of Biing-Jye et al. and Haitz et al. with respect to the patentability of Claims 1 and 11. Consequently, Claims 1 and 11 are patentable over Biing-Jye et al. and Haitz et al. in view of any of these references. Claims 3, 5, 6 and 7 are patentable over the cited combinations of references as a result of their dependence on Claim 1. Claims 13, 15, 16, 17 and 18 are patentable over the cited combinations of references as a result of their dependence on Claim 11.

Entry of this response is requested under Rule 116 as not involving any claim amendment or further searching, and as pointing out a flaw in the previous rejection. For the above reasons, Applicants respectfully request reconsideration and allowance of Claims 1, 3-11 and 13-18, all pending. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 453-9200.

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Respectfully submitted,



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